

Honors Post-Lab Analysis Lab 1

Answer the following questions and problems in your lab notebook. Be sure to show all of your work with formulas.

Evaporation

What percent of the salt that you dissolved was recovered?

Can you account for the percentage that you received? (Be specific in your answer stating why your percent was above/below 100%)

What would happen to the percentage of the salt recovered if: Explain the reason for each answer.

- salt was left on the weigh paper after being transferred to the beaker?
- the sand was still wet after decantation?
- the filter paper had a hole in it?
- carbon was deposited on the bottom of the evaporating dish from incomplete combustion?

Candle Lab (Answer these questions in addition to the questions in the lab handout)

Calculate the amount of heat energy released by the combustion reaction.

For water, it takes 4.18 joules (J) of heat to raise 1.00 gram of water 1.00°C. This value is referred to as the specific heat of water ($C_p \text{ H}_2\text{O}$). The density of water is 1.00 g/ml.

$$C_p \text{ H}_2\text{O} = 4.18 \text{ J/g} \cdot ^\circ\text{C}$$

Calculate how many joules that would be released per gram of wax? How much for 15.0 kg of wax?

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